

Name: \_\_\_\_\_

### p1028b: Combine Like Terms (v1)

#### Example

Combine like terms.

$$-6x - 3x^2 - 9x - 8x^2 + 4 + 8x^2 + 2 + 6 - 7x + 7$$

#### Answer

Combine the quadratic terms.

$$-3x^2 - 8x^2 + 8x^2 \equiv -3x^2$$

Combine the linear terms.

$$-6x - 9x - 7x \equiv -22x$$

Combine the constant terms.

$$4 + 2 + 6 + 7 \equiv 19$$

The final result:

$$-3x^2 - 22x + 19$$

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#### Question 1

Combine like terms.

$$-x^2 + 5x - 5x + 7x^2 - 8 + x + 9 - 9x^2 - 6 - 7x^2$$

**Question 2**

Combine like terms.

$$-2x - 4 - 3x^2 + 6x^2 + 3 + 8x^2 + 9 + 7x - 9x - 6x$$

**Question 3**

Combine like terms.

$$3x^2 + 7x^2 - 9x + 4 - 5x^2 - 4 + 8x - x - 3 + x^2$$

**Question 4**

Combine like terms.

$$5 - 4x^2 + 3x^2 - 6x^2 - 1 - 5 - 9x - 7x + 8x + 2x$$

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### p1028b: Combine Like Terms (v2)

#### Example

Combine like terms.

$$6x^2 - 4x^2 + 8x - 2x^2 - 9 + 4 + 5x - 1 - 8x + 3x^2$$

#### Answer

Combine the quadratic terms.

$$6x^2 - 4x^2 - 2x^2 + 3x^2 \equiv 3x^2$$

Combine the linear terms.

$$8x + 5x - 8x \equiv 5x$$

Combine the constant terms.

$$-9 + 4 - 1 \equiv -6$$

The final result:

$$3x^2 + 5x - 6$$

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#### Question 1

Combine like terms.

$$-4x^2 - x^2 + 5x - 2 + 4x^2 + 9 - 7x + 8 - 3x + 6$$

**Question 2**

Combine like terms.

$$4 + 6x - 9x^2 - 8 - 2x^2 - 6x - 5 + 8x + 3x^2 - 4x$$

**Question 3**

Combine like terms.

$$-4x^2 + 6x + 4 - 7 - 2 + 9x - 9x - 5x^2 + 7x^2 + 3$$

**Question 4**

Combine like terms.

$$2x^2 - 1 + 6 + x + 5 - 5x^2 + 9x - 9x^2 + 8x - 8$$

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### p1028b: Combine Like Terms (v3)

#### Example

Combine like terms.

$$-5x + 3x^2 - 3x - 6x + 1 - 2 + 2 + 4x^2 + 6x^2 + 7$$

#### Answer

Combine the quadratic terms.

$$3x^2 + 4x^2 + 6x^2 \equiv 13x^2$$

Combine the linear terms.

$$-5x - 3x - 6x \equiv -14x$$

Combine the constant terms.

$$1 - 2 + 2 + 7 \equiv 8$$

The final result:

$$13x^2 - 14x + 8$$

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#### Question 1

Combine like terms.

$$-x^2 + 9x + 7 - 2x - 4x^2 - 8 + 8x + 6 + 5x^2 - 7x^2$$

**Question 2**

Combine like terms.

$$5x + 6x^2 - 9 + x^2 - 8 - 5x^2 + 2x + 8 - 6x - 1$$

**Question 3**

Combine like terms.

$$1 - 3 + 7x^2 + 3x - 1 + 2x - 8x + 5x^2 - 5x^2 + 4x$$

**Question 4**

Combine like terms.

$$4 - 7x^2 + 3x + 9x + 7x^2 + 5x - 9 - 4x^2 + 2 - 2$$

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### p1028b: Combine Like Terms (v4)

#### Example

Combine like terms.

$$2x^2 - 7x - 3 + 3 + 8x^2 - 4x - 5x^2 + 1 + 5x - 2$$

#### Answer

Combine the quadratic terms.

$$2x^2 + 8x^2 - 5x^2 \equiv 5x^2$$

Combine the linear terms.

$$-7x - 4x + 5x \equiv -6x$$

Combine the constant terms.

$$-3 + 3 + 1 - 2 \equiv -1$$

The final result:

$$5x^2 - 6x - 1$$

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#### Question 1

Combine like terms.

$$-8 + 6 + 3x^2 - 5x^2 + 4x^2 - 4 + 8x - 9x + 5x + 7x$$

**Question 2**

Combine like terms.

$$3x^2 - 5x - 1 - 8 + x - 6x^2 - 2x^2 + 5 + 6x - 4x$$

**Question 3**

Combine like terms.

$$-5 - 2x - 6x + x - 9 + 8 + 5x^2 + 7x^2 + 3x^2 + 2x$$

**Question 4**

Combine like terms.

$$-5 - 9x + 7 - 3x^2 + 2 + 8x + 5x^2 - 8x^2 + 4x - 7x^2$$

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### p1028b: Combine Like Terms (v5)

#### Example

Combine like terms.

$$-8x^2 + 2x^2 - x^2 + 6x + 8x + 7 + 4 - 5 - 3x + x^2$$

#### Answer

Combine the quadratic terms.

$$-8x^2 + 2x^2 - x^2 + x^2 \equiv -6x^2$$

Combine the linear terms.

$$6x + 8x - 3x \equiv 11x$$

Combine the constant terms.

$$7 + 4 - 5 \equiv 6$$

The final result:

$$-6x^2 + 11x + 6$$

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#### Question 1

Combine like terms.

$$-1 + x^2 - 5x^2 + 8x^2 + 6x - 7 - 9 + 5x - 4x - 2$$

**Question 2**

Combine like terms.

$$-9x^2 + 6 - 4x^2 - 6 + 9x + 8x^2 - 8 + 2x - x + 4$$

**Question 3**

Combine like terms.

$$-x^2 + 9x + 7x - 9 - 4x^2 + 6 + 5x - 8 - 3x^2 - 2x^2$$

**Question 4**

Combine like terms.

$$4x^2 - 1 + 9x + 3x - 3x + 2x^2 - 6 - 5 + x^2 + 5x$$

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### p1028b: Combine Like Terms (v6)

#### Example

Combine like terms.

$$x + 4x^2 + 5x^2 - 2 - 6x + 3 - 7 - x^2 - 8x + 9$$

#### Answer

Combine the quadratic terms.

$$4x^2 + 5x^2 - x^2 \equiv 8x^2$$

Combine the linear terms.

$$x - 6x - 8x \equiv -13x$$

Combine the constant terms.

$$-2 + 3 - 7 + 9 \equiv 3$$

The final result:

$$8x^2 - 13x + 3$$

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#### Question 1

Combine like terms.

$$x - 3x^2 - 8x^2 - 1 + 7 - 6x - 7x^2 + 8 + 9x + 5x^2$$

**Question 2**

Combine like terms.

$$9 + 5x^2 - 8 + 7x + 3x^2 - 5x^2 - 2 - 4x + x - 3x$$

**Question 3**

Combine like terms.

$$-6x + 9x^2 + 7 + 8x + 3x + 2x^2 + 6x^2 - 1 + 5 - 9x$$

**Question 4**

Combine like terms.

$$9x^2 - x^2 + 2 - 2x^2 + 5x + 6x + 3 - 7x + 1 - 9$$

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### p1028b: Combine Like Terms (v7)

#### Example

Combine like terms.

$$x - 3x^2 - 8 + 6x^2 + 9x - 4 - 2x^2 + 3x - 7 + 2x$$

#### Answer

Combine the quadratic terms.

$$-3x^2 + 6x^2 - 2x^2 \equiv 1x^2$$

Combine the linear terms.

$$x + 9x + 3x + 2x \equiv 15x$$

Combine the constant terms.

$$-8 - 4 - 7 \equiv -19$$

The final result:

$$x^2 + 15x - 19$$

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#### Question 1

Combine like terms.

$$6x - 4 + 7x^2 + 8x^2 + 2x - 5 - 6 + 5x^2 + 9x - 3$$

**Question 2**

Combine like terms.

$$-7x + 4x - 5x - 2 - x^2 + 7 - 4x^2 + 6x^2 + 5 - 8x^2$$

**Question 3**

Combine like terms.

$$-5x^2 - 4x - 7x + 9x^2 - 1 - 3 - 2x - 8x^2 + 2 + 3$$

**Question 4**

Combine like terms.

$$2x + 4 + 3x^2 - 3x + 7x^2 + 6x^2 - 8x - 9 + 9 + x$$

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### p1028b: Combine Like Terms (v8)

#### Example

Combine like terms.

$$-8x^2 + 6x^2 + 3 - 3x^2 + 1 + 8x - 9 + 9x - 7x + 5x$$

#### Answer

Combine the quadratic terms.

$$-8x^2 + 6x^2 - 3x^2 \equiv -5x^2$$

Combine the linear terms.

$$8x + 9x - 7x + 5x \equiv 15x$$

Combine the constant terms.

$$3 + 1 - 9 \equiv -5$$

The final result:

$$-5x^2 + 15x - 5$$

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#### Question 1

Combine like terms.

$$-8x^2 + 3x^2 - 7x + 6 - 1 + 8x + 9x + 2 - 6x^2 + 5x$$

**Question 2**

Combine like terms.

$$3x^2 - 6x - x - 9 + 8 + 2x^2 + 6 - 7x^2 - 5x + 9x$$

**Question 3**

Combine like terms.

$$4x + 3x^2 - 3 + 5 - 6x^2 + 7 - 5x + x^2 + 8x - 8x^2$$

**Question 4**

Combine like terms.

$$5 + 6 + 8x - 9 - 8x^2 - 2x + 2x^2 + 4x^2 - 5x + 9x^2$$

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### p1028b: Combine Like Terms (v9)

#### Example

Combine like terms.

$$-7x^2 + 5 - 5 - x^2 + 6x - 4x + 2x^2 + 9 - 9x + 8x^2$$

#### Answer

Combine the quadratic terms.

$$-7x^2 - x^2 + 2x^2 + 8x^2 \equiv 2x^2$$

Combine the linear terms.

$$6x - 4x - 9x \equiv -7x$$

Combine the constant terms.

$$5 - 5 + 9 \equiv 9$$

The final result:

$$2x^2 - 7x + 9$$

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#### Question 1

Combine like terms.

$$8 + 6 + 2x^2 - 3x + x^2 + 9x^2 - 4x - x - 5 + 7$$

### **Question 2**

Combine like terms.

$$9x - 3 + 8 + 7x^2 + 3 - 9x + 4x^2 + 2x^2 + x + 6x^2$$

### **Question 3**

Combine like terms.

$$-2x^2 - 9 + 5 - 4x^2 + 8 - 3x - x^2 - 7x + 3x + x^2$$

### **Question 4**

Combine like terms.

$$7 + 5 + 8 - 9x^2 + 6x - 4x + 2x^2 - 6x^2 - 7x + 3x^2$$

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### p1028b: Combine Like Terms (v10)

#### Example

Combine like terms.

$$2 - x + x + 3x - 3x^2 - 2x^2 - 4 + 5 - 7x^2 + 4$$

#### Answer

Combine the quadratic terms.

$$-3x^2 - 2x^2 - 7x^2 \equiv -12x^2$$

Combine the linear terms.

$$-x + x + 3x \equiv 3x$$

Combine the constant terms.

$$2 - 4 + 5 + 4 \equiv 7$$

The final result:

$$-12x^2 + 3x + 7$$

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#### Question 1

Combine like terms.

$$9 + 4x + x - 5x^2 + 7x^2 - 9 - 3x + 5 - 8x^2 - x$$

**Question 2**

Combine like terms.

$$1 + 5x + 4 - 9x^2 - x + 8x^2 - 2x^2 - 5x + 9 + 7x^2$$

**Question 3**

Combine like terms.

$$x^2 + 9x^2 + 8 - 3x + 7x^2 - 5x - 7 + 4x + 2 + 6x^2$$

**Question 4**

Combine like terms.

$$6x^2 + 4 + x + 7 + 5 + 3x - 8x^2 - x^2 - 6x + 9x^2$$

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### p1028b: Combine Like Terms (v11)

#### Example

Combine like terms.

$$-8x + 7x^2 - 9x^2 - 5x + 3 - 4x + 5 + 6x^2 + 4 - 3x^2$$

#### Answer

Combine the quadratic terms.

$$7x^2 - 9x^2 + 6x^2 - 3x^2 \equiv 1x^2$$

Combine the linear terms.

$$-8x - 5x - 4x \equiv -17x$$

Combine the constant terms.

$$3 + 5 + 4 \equiv 12$$

The final result:

$$x^2 - 17x + 12$$

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#### Question 1

Combine like terms.

$$-3x^2 - 4 + 5 - 7 + 6x + 2x^2 - 8x^2 + 3x + 7x + 4x$$

### **Question 2**

Combine like terms.

$$-5x^2 + 8x^2 + 7x - 4x + 3 + 4x - 8 - 3x^2 - 9 + x^2$$

### **Question 3**

Combine like terms.

$$7x + 6x^2 - 7 + 9 - 6x + 8x^2 + 2x - 3x^2 + 4 - 2x^2$$

### **Question 4**

Combine like terms.

$$-5x - 3x + 4x^2 - 9x^2 - 2 - x^2 + 8 + 7x - 8 + 2x^2$$

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### p1028b: Combine Like Terms (v12)

#### Example

Combine like terms.

$$-8x + 7 - 3x^2 + 2 + 5x^2 - 5x + 4x^2 + 9 - 2x + 6$$

#### Answer

Combine the quadratic terms.

$$-3x^2 + 5x^2 + 4x^2 \equiv 6x^2$$

Combine the linear terms.

$$-8x - 5x - 2x \equiv -15x$$

Combine the constant terms.

$$7 + 2 + 9 + 6 \equiv 24$$

The final result:

$$6x^2 - 15x + 24$$

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#### Question 1

Combine like terms.

$$-2 + 2x + 5 + 4x^2 - 3x^2 + 3x^2 - 5 - x - 8x + 7x^2$$

**Question 2**

Combine like terms.

$$-5x^2 + 7x + 6x - 4 - 3x + 2x^2 - 6 + 4 - 2x^2 + 9$$

**Question 3**

Combine like terms.

$$-3x + x^2 + 3x - 2 + 2x^2 + 4x + 6x^2 + 9 + 8 - 8$$

**Question 4**

Combine like terms.

$$3x^2 - 7x - 5x - 4x^2 + 1 + 2x^2 + 6 - 8x + 4 - 2$$

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### p1028b: Combine Like Terms (v13)

#### Example

Combine like terms.

$$2 - 6x^2 - 2x - 3 + 5x^2 + 4x^2 - 5x - 7x + 9 + 3$$

#### Answer

Combine the quadratic terms.

$$-6x^2 + 5x^2 + 4x^2 \equiv 3x^2$$

Combine the linear terms.

$$-2x - 5x - 7x \equiv -14x$$

Combine the constant terms.

$$2 - 3 + 9 + 3 \equiv 11$$

The final result:

$$3x^2 - 14x + 11$$

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#### Question 1

Combine like terms.

$$3x + x - 4x^2 + 5x - 3x^2 + 6x^2 - 8 - 9 - 1 + 8$$

**Question 2**

Combine like terms.

$$-9 + 9 - 3x + 6x^2 + 5x + 3x^2 - 7 - 4x^2 - 2x - x$$

**Question 3**

Combine like terms.

$$5x^2 - 1 - 6 - 7x^2 - 5 + 9x + 8x - 4x + 6x^2 - 9$$

**Question 4**

Combine like terms.

$$-8 + 9x^2 - 4 + 6x - 5x^2 - 7x - 6x + 8x^2 - 1 + 4x^2$$

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### p1028b: Combine Like Terms (v14)

#### Example

Combine like terms.

$$-x + 9x^2 + 2 - 6x + 7x^2 + 6 + x^2 - 9 + 8x - 7$$

#### Answer

Combine the quadratic terms.

$$9x^2 + 7x^2 + x^2 \equiv 17x^2$$

Combine the linear terms.

$$-x - 6x + 8x \equiv 1x$$

Combine the constant terms.

$$2 + 6 - 9 - 7 \equiv -8$$

The final result:

$$17x^2 + x - 8$$

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#### Question 1

Combine like terms.

$$7x - 2 - 9 + 3x^2 + 5x - 4x + 6x^2 + 1 - 5x^2 + 4$$

**Question 2**

Combine like terms.

$$-x + x - 4x^2 + 3x - 8x^2 - 2x^2 + 9 - 7 - 5 + 7x$$

**Question 3**

Combine like terms.

$$-4x + 2 + 7x - 9 - 7x^2 + 5x + 8 - 5x^2 + 6x^2 + 9$$

**Question 4**

Combine like terms.

$$6x^2 - 4x^2 + 4 - 2 + x + 2 - 8x^2 + 9x - 6x + 7$$

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### p1028b: Combine Like Terms (v15)

#### Example

Combine like terms.

$$-5x^2 + 6 + 1 - 8x - x^2 - 4x^2 - 9x + 9x + 5 - 6x$$

#### Answer

Combine the quadratic terms.

$$-5x^2 - x^2 - 4x^2 \equiv -10x^2$$

Combine the linear terms.

$$-8x - 9x + 9x - 6x \equiv -14x$$

Combine the constant terms.

$$6 + 1 + 5 \equiv 12$$

The final result:

$$-10x^2 - 14x + 12$$

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#### Question 1

Combine like terms.

$$-7x^2 - 8x - 6 + 8x^2 + x + 9x - 2 + 2x^2 - 5 + 5$$

**Question 2**

Combine like terms.

$$-9 - 3x + 3x^2 + 9 + 7x - 4 - 8x^2 + 8x^2 - 7x + 6$$

**Question 3**

Combine like terms.

$$3x^2 - 1 + 4x^2 - 5x^2 - 2x + 7 + x + 6x + 5 + 9x^2$$

**Question 4**

Combine like terms.

$$4x + 2x^2 + 9x^2 - 2x + 6 + 5 - 3x^2 - 9x - 7 + 1$$

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### p1028b: Combine Like Terms (v16)

#### Example

Combine like terms.

$$-9x + 6x^2 + 2 - 2x^2 - 6x^2 + 7 + 5 + 9x + x - 7x$$

#### Answer

Combine the quadratic terms.

$$6x^2 - 2x^2 - 6x^2 \equiv -2x^2$$

Combine the linear terms.

$$-9x + 9x + x - 7x \equiv -6x$$

Combine the constant terms.

$$2 + 7 + 5 \equiv 14$$

The final result:

$$-2x^2 - 6x + 14$$

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#### Question 1

Combine like terms.

$$-2x^2 + 2x^2 + 9 + 5x^2 - 9x + 8 - x + 7x - 4 - 7$$

**Question 2**

Combine like terms.

$$-7 + 6 - 8x^2 + 2x^2 - 6x + 4x^2 + 8x + 9x - 9 - 5x^2$$

**Question 3**

Combine like terms.

$$-x + x + 2x - 6 + 8x^2 - 8x^2 - 9 + 7x^2 - 3 + 6$$

**Question 4**

Combine like terms.

$$-3x^2 - 7 + 3x^2 + 5 - 5x + x + 2x - 9x^2 - 1 - 8x$$